

CLAIMS

What is claimed is:

1. A method of forming a two-piece tire assembly by mounting a giant tread belt onto a tire carcass when the carcass is mounted on a rim on a vehicle; the method comprising the steps of:
 - jacking the vehicle wheel position up;
 - pulling a vacuum partially collapsing the carcass;
 - placing a vertical upper radially inner portion of the tread belt onto a top surface of the carcass about one-half way or more across the axial width of the carcass thereby supporting the tread belt weight;
 - lifting or pushing the rest of the tread belt axially over the carcass a predetermined distance
 - inflating the carcass to a predetermined press to form the two piece tire assembly while mounted to the vehicle.
2. The method of claim 1 further comprising the step of
 - deflating the carcass; and
 - inserting a pair of support arms between the bead and the deflated carcass to engage the radially inner surface of a tread belt.
3. The method of claim 1 wherein the radially inner surface of the tread belt and the radial outer surface of the carcass have interlocking circumferentially continuous ribs and grooves and the method further comprises the steps of aligning the grooves and ribs prior to inflating the carcass.
4. The method of claim 1 further comprises the steps of
 - holding or restraining the tread belt using a pair of support arms inserted not the full width of the belt;
 - moving the tread belt laterally over the carcass past the support arms.
5. The method of claim 1 wherein the step of holding includes the step of tilting the tread belt on the support arms whereby the weight of the tread belt moves the lower portion at least partially over the carcass.

6. The method of claim 1 wherein the step of lifting or pushing the tread belt includes using the support arms to lift or push the tread belt over the carcass.
7. The method of claim 1 wherein the step of angularly rotating the support arms to locally lift or push the tread belt onto the carcass
8. The large tire rim comprises:
 - a cylindrical rim base;
 - an annular removable rim flange;
 - an annular bead seat band;
 - an annular locking ring;
 - an annular flange seal; and
 - a flange clamping means, the clamping means has three inner first block portions and an outer secondary ring portion, the inner first block portions interlock with the bead seat band and abut a portion of the outer secondary ring portion, the outer secondary ring presses against the inner first block portion and the cylindrical rim base; and threaded fasteners are inserted through the outer secondary ring portion and are threaded into each of the inner first block portions and pulls the annular bead seat band firmly against the annular locking ring.
9. A tire handling and tread belt manipulator mechanism comprises:
 - a pair of movable manipulator arms;
 - a pair of tire grippers attached to the ends of the manipulator arms;
 - a pair of tread belt support arms, one being attached above the tire grippers on each manipulator arm;
 - a hydraulic means to move the manipulator arms.

10. The tire handling and tread belt manipulator mechanism of claim 9 further comprises:
a pair of tread belt end blocks, one end block being attached to the end of the tread belt support arm.
11. The tire handling and tread belt manipulator mechanism of claim 10 further comprises:
at least two protruding rods or blocks spaced on each support arm.
12. The tire handling and tread belt manipulator mechanism of claim 9 wherein each tread belt support arm has one or more telescoping slidable extension sections.